

FIVE MUCROTRICHAPHIS APHIDS¹

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This report deals with several species of aphids which are not typical *Macrosiphum*, yet are closely related to that genus. A new genus, *Mucrotrichaphis*, is erected and four of the five species considered are here described as new.

Mucrotrichaphis n. gen.

Mucrotrichaphis may be characterized as having: Weakly developed antennal tubercles which (most typically) scarcely exceed the vertex; slender, pointed hairs on vertex, antennae, body, and hind tibiae; cornicles well developed, cylindrical, imbricated and possessing reticulations; cauda elongate with several pairs of lateral hairs; general body shape as in *Macrosiphum*; antennae equal to or longer than the body; hind tibiae shorter than usual for typical *Macrosiphum*; ocular tubercles present.

Genotype—*Mucrotrichaphis toti* K.-A.

Taxonomy—*Mucrotrichaphis* species differ from typical *Macrosiphum* in having pointed rather than knobbed, flattened or blunt hairs on the vertex and antennae, possessing weakly developed antennal tubercles, and in being smaller than the average for *Macrosiphum* species. It differs from typical *Aphis* in having cornicles distinctly reticulated, cauda and antennae more elongate, with more typical *Macrosiphum* body shape. This genus would be more closely related to the Aphina than most genera in the Macrosiphina subtribe.

KEY TO APTERA

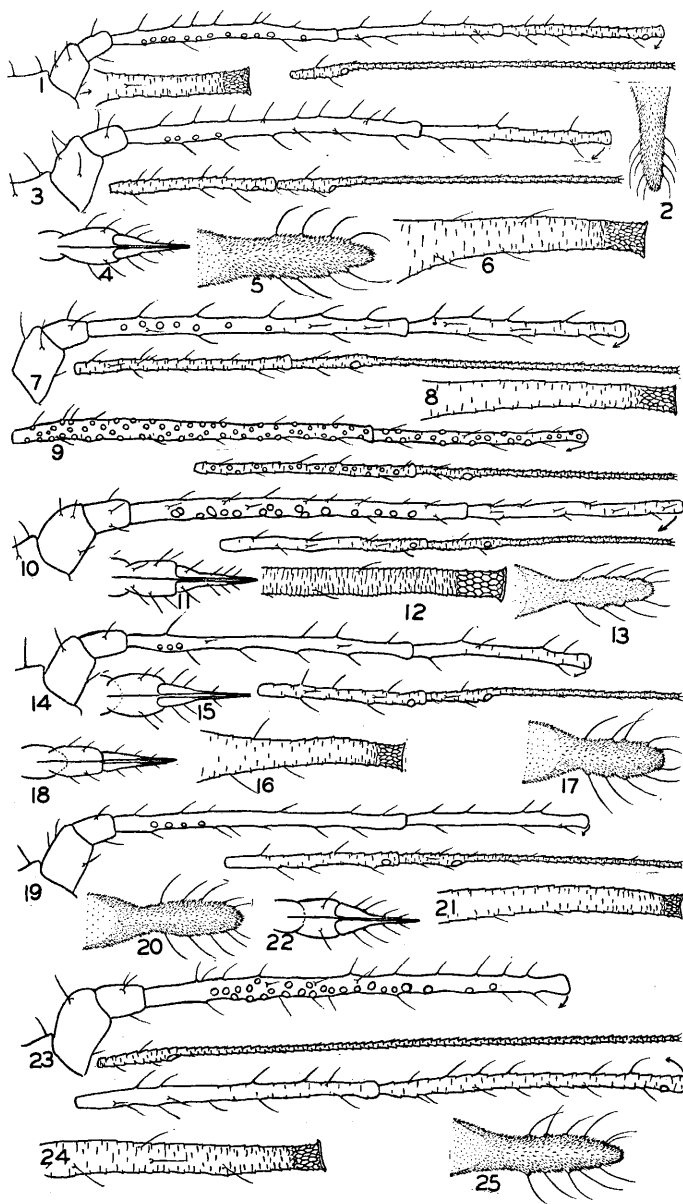
- A. Unguis exceeding 4 times base of antennal IV.....**toti** n. sp.
- AA. Unguis not exceeding 4 times base antennal IV.
 - B. Cornicles with 2 or 3 rows of reticulations; hairs on dorsum of abdomen not noticeably abundant.....**zerohypsi** n. sp.
 - BB. Cornicles with 4 to 5 rows of reticulations, hairs on dorsum of abdomen very numerous.....**anomellus** (K.-A.)

KEY TO ALATES

- A. Unguis usually 1.75 times cornicles.
 - B. Sensoria on antennal III exceeding 18 in number.....**flavila** n. sp.
 - BB. Sensoria on antennal III not exceeding 18 in number.....**toti** n. sp.
- AA. Unguis seldom exceeding 1.5 times cornicles.....**albicornus** n. sp.

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LEGEND FOR FIGURE

Mucrotrichaphis toti n. sp., alate 1-2, aptera 3-6, ovipara 7-8, alate male 9.
M. albicornus n. sp., alate 10-13. *M. anomellus* (K.-A.), aptera 14-17. *M. zero-*
hysi n. sp., aptera 18-21. *M. flavila* n. sp., alate 22-25.

Mucrotrichaphis toti n. sp.

Apterous vivipara—Body 1.43 to 1.59 mm. long; antennae 2.1 to 2.15, dark beyond basal one-half of III; antennal III, 0.51 to 0.59 with 2 to 4 sensoria on basal one-half; IV, 0.3 to 0.37; V, 0.3 to 0.34; VI, 0.11 to 0.12+0.51 to 0.62; rostral IV+V, 0.12 to 0.14 mm., reaching 3rd coxae; hind tibiae 0.96 to 1.08; hind tarsi 0.12 to 0.14; cornicles, 0.47 to 0.52, reticulation 0.08, 6 to 8 rows; cauda 0.24 to 0.34 mm. long.

Alate vivipara—Legs, cornicles, cauda and antennae dusky; body, 1.57 mm. long; antennae, 2.05, dark entire length; antennal III, 0.47 mm. with 11 to 12 sensoria in single row; IV, 0.32; V, 0.32; VI, 0.11+0.6; rostral IV+V, 0.12, reaching 3rd coxae; hind tibiae 0.92; hind tarsi 0.12; cornicles 0.3; cauda 0.2 mm. long.

Apterous ovipara—Body 1.33 to 1.54 mm. long; antennae, 2.34 mm., dusky beyond base of III; antennal III, 0.59 to 0.67 with 7 to 8 sensoria in a single row; IV, 0.4 to 0.44; V, 0.4 to 0.44; VI, 0.14+0.59; rostral IV+V, 0.14; hind tibiae 1.29 to 1.45; tibiae swollen and bearing sensoria on basal one-third; hind tarsi 0.13 to 0.14; cornicles 0.4 to 0.53, reticulated; cauda 0.24 to 0.3 mm. long.

Alate male—Body 1.64 mm. long; antennae 2.3; antennal III, 0.71 with approximately 60 sensoria; IV, 0.45 to 0.47 with 30 sensoria; V, 0.4 to 0.47 with 16 sensoria; VI, 0.13+0.5; hind tibiae, 1.25; hind tarsi, 0.14; cornicles 0.14 mm. long.

Collections—Type, 6 miles South of Woodruff, Utah, August 25, 1938 (G. F. Knowlton-D. E. Hardy); on *Artemisia tridentata*; paratypes, Monte Cristo, August 25, 1938 (Knowlton-Hardy); Logan Canyon (Cowley Canyon), August 12, 1934 (T. O. Thatcher) on *A. tridentata*; Logan Canyon (Wood Camp), September 2, 1934 (T. O. T.) on *A. tridentata*; Logan Canyon (Natural bridge trail), October 14, 1934 (T. O. T.) on *A. tridentata*; during 1939 collected in Utah at Allen's Canyon, several places in Logan Canyon, Huntsville, between Woodruff and Monte Cristo (Knowlton); on short sage at Cedar Breaks, Utah, August 9-10, 1939 (H. F. Thornley); and at Elko, Nevada, July 1, 1939 (Knowlton).

Taxonomy—This species differs from *zerohypsi* and *anomellus* in having longer unguis and more reticulation on cornicles.

Mucrotrichaphis albicornus n. sp.

Alate vivipara—Body 1.94 to 2.07 mm. long, color black; antennae 2.31 mm., dusky beyond basal one-half of III; antennal III, 0.61 to 0.67 with 12 to 16 sensoria; IV, 0.38 to 0.44; V, 0.36 to 0.42; VI, 0.12+0.65; rostral IV+V, 0.13 to 0.14, rostrum reaching 2nd coxae; hind tibiae 1.14 to 1.33; hind tarsi, 0.13 to 0.14; cornicles 0.45 to 0.51 with reticulated portions of lighter color than the remainder of cornicles; cauda 0.24 to 0.3 with 4 lateral hairs.

Collections—Type collected on *Artemisia*, Logan Canyon, August 23, 1936 (C. F. Smith); the paratype slide, Cedar Valley, May 10, 1936 (Knowlton-Smith). (This slide also contains an apterous *Prociphilus* sp.) Collected in Cache National Forest, Dry Bread Pond, July 8, 1939, on *Artemisia tridentata* (Knowlton), Smithfield, June 5, 1939 (R. L. Janes).

Taxonomy—This species differs from *M. flavila* and *M. toti* in having a shorter unguis.

***Mucrotrichaphis anomellus* (K.-A.)³ n. comb.**

Knowlton and Allen, *Canad. Ent.* 70: 75, 1938 (*Macrosiphum*).

Apterous vivipara—Body 1.43 to 1.96 mm. long; vertex aphid-like, with pointed hairs; antennae 1.96 to 2.15 mm. long, dusky to dark beyond basal half of III; antennal III, 0.51 to 0.67 mm. long, with 2 to 5 sensoria; IV, 0.3 to 0.36; V, 0.26 to 0.34; VI, 0.12 to 0.13+0.37 to 0.45; rostrum attaining 3 coxae; rostral IV+V, 0.14 to 0.16 mm. long; hind tibiae 1.02 to 1.14; hind tarsi 0.12 to 0.14; cornicles 0.43 to 0.49, dusky, with 3 to 5 hairs; cauda dusky, 0.3 to 0.34 mm. long.

Collections—Taken upon *Artemisia tridentata* at Little Cottonwood Canyon, Utah, April 24, 1937 (Knowlton); and Big Cottonwood Canyon, Utah, July 10, 1936 (Knowlton and C. F. Smith).

Taxonomy—This species differs from other species in the presence of numerous pointed hairs on the abdomen, in having fewer reticulations on cornicles than *M. toti* and more than *M. zerohypsi*.

***Mucrotrichaphis zerohypsi* n. sp.**

Apterous vivipara—Body 1.64 to 1.76 mm. long; antennae 2.11 to 2.15 mm., black beyond base of antennal III; antennal III, 0.53 to 0.63 with 4 or 5 sensoria on basal one-half; IV, 0.36 to 0.41; V, 0.36 to 0.4; VI, 0.14+0.43 to 0.47; rostral IV+V, 0.14 to 0.15, reaching 3rd coxae; hind tibiae 1.12 to 1.23, distal one-half black; hind tarsi 0.12 to 0.14; cornicles 0.47 to 0.53, dark; cauda 0.32 to 0.33, dusky.

Collections—On *Artemisia*, one mile south of Dry Canyon (Cache County), Utah, April 8, 1934 (T. O. Thatcher).

Taxonomy—*Mucrotrichaphis zerohypsi* differs from *M. anomellus* in having less reticulation on cornicles and fewer hairs on the abdomen.

³In the opinion of the writers and of several taxonomists of whom they inquired, *Macrosiphum anomellus* K.-A., 1938, is not preoccupied by *Macrosiphum anomalae* H.-F., 1931. Proposing a new name for this species would only inject another name into the literature which would need to be suppressed as a synonym.

Mucrotrichaphis flavila n. sp.

Alate vivipara—Body 2.11 to 2.34 mm. long, color dark; antennae, 3.07 mm. long, dusky beyond base of antennal III; antennal III, 0.77 to 0.82 with 20 to 26 sensoria scattered over entire length; IV, 0.54 to 0.57; V, 0.49 to 0.57; VI, 0.13 to 0.16+0.91 to 1.01; rostral, IV+V, 0.15 mm., reaching 2nd coxae; hind tibiae 1.51; hind tarsi 0.16; cornicles, 0.51, dark entire length; cauda 0.34 to 0.35, dark.

Collections—On *Artemisia*, Fishing Bridge, Yellowstone National Park, Wyoming, July 18, 1936 (G. F. Knowlton); Montpelier, Idaho, July 19, 1936 (Knowlton).

Taxonomy—*Mucrotrichapis flavila* differs from *M. albicornus* and *M. toti* in having longer antennae, more sensoria on antennal III and antennal tubercles more prominently developed.
